(NEW)
MW

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF
PREVENTION, PESTICIDES, AND
TOXIC SUBSTANCES

**PC Code: 118203**
**DP Barcode: 349851**

**MEMORANDUM**

June 30, 2009

**SUBJECT:** **Saflufenacil (BAS 800 H):** Transmittal of Ecological Effects Data Evaluation Reviews (DERs)

**TO:** Kathryn Montague, Product Manager
Joanne Miller, Team Leader
Herbicide Branch, RM Team 23
Registration Division (7505P)

**FROM:** Anita Pease, Senior Biologist A Pease 6/30/09
Environmental Risk Branch IV
Environmental Fate and Effects Division (7507P)

**THROUGH:** Elizabeth Behl, Branch Chief M. Echevarria (for E. Behl) 6/30/09
Environmental Risk Branch IV
Environmental Fate and Effects Division (7507P)

The Environmental Fate and Effects Division (EFED) has completed its review of 45 ecotoxicity studies submitted to support the registration of the new herbicide, saflufenacil, for the proposed uses on cereal small grains, corn, chickpeas, cotton, edible beans, edible peas, lentils, lupine, sorghum, soybeans, sunflowers, fruit tree orchards, nut tree orchards, vineyards, fallow croplands, and non-agricultural areas including pine plantations, rights-of-way, bare ground, and Christmas tree plantations. Ecological effects data were submitted for technical grade saflufenacil (BAS 800 H), formulated products (BAS 781 02H, BAS 800 01H, and BAS 800 02H), and degradates (M07 and M08). Official signed copies of the DERs accompany this memo.

Of the 45 submitted studies, 37 are classified as "Acceptable" and eight are classified as "Supplemental". Seven of the eight studies classified as "Supplemental" were non-guideline studies. The remaining "Supplemental" study was classified based on precipitate in the highest test concentration where effects were observed. The status of the ecological effects data requirements for saflufenacil are listed in the attached table.

Although all of the data requirements for saflufenacil are fulfilled, it is important to note that as a result of the new CFR 40 Part 158 data requirements, avian acute oral data are now required for one passerine species in addition to either a waterfowl or upland game species for all new federal actions including Section 3 new chemical registrations. Avian oral toxicity data were not submitted for a passerine species exposed to saflufenacil; however, the available acute oral toxicity data for mallard duck and bobwhite quail, when compared to estimated environmental concentrations of saflufenacil, indicate that LOCs are not exceeded for birds on an acute basis. EFED acknowledges that the acute oral passerine study was not originally identified as a data gap when the initial registration package was screened for completeness; at that time, there was no Divisional policy on guidance for requesting acute oral passerine data. Currently, EFED policy requires that the lack of acceptable passerine data be listed as a data gap. However, given the timing of the EFED policy and the lack of observed effects at the highest saflufenacil treatment levels for other tested bird species, EFED recommends that the registration decision not be delayed based on the passerine data gap. If new uses of saflufenacil are proposed in the future, EFED would require that a passerine study protocol be submitted to the Agency prior to initiation of the study.

| Summary of Ecological Effects Data Reviews for Saflufenacil[1] | | | | | |
|---|---|---|---|---|---|
| **Guideline** | **Data Requirement** | **Formulation or Metabolite** | **MRID** | **Study Classification** | **Fulfills Data Requirements?** |
| 850.2100 (71-1) | Avian Acute Oral Toxicity Test | BAS 800 H<br>BAS 800 H | 47127911<br>47127912 | Acceptable<br>Acceptable | Yes[2] |
| 850.2200 (71-2) | Avian Dietary Toxicity Test | BAS 800 H<br>BAS 800 H | 47127913<br>47127914 | Acceptable<br>Acceptable | Yes |
| 850.2300 (71-4) | Avian Reproduction Test | BAS 800 H<br>BAS 800 H | 47699904[3]<br>47127916 | Acceptable<br>Acceptable | Yes |
| 850.1075 (72-1) | Freshwater Fish Acute Toxicity Test | BAS 800 H<br>BAS 800 H<br>BAS 781 02H | 47127904<br>47127905<br>47560401 | Acceptable<br>Acceptable<br>Acceptable | Yes |
| 850.1010 (72-2) | Aquatic Invertebrate Acute Toxicity Test, Freshwater Daphnids | BAS 800 H<br>BAS 781 02H | 47127901<br>47560402 | Acceptable<br>Acceptable | Yes |
| 850.1075 (72-3) | Estuarine/Marine Fish Acute Toxicity Test | BAS 800 H | 47127906 | Acceptable | Yes |
| 850.1025 (72-3(b)) | Oyster Acute Toxicity Test (Shell Deposition) | BAS 800 H | 47127902 | Acceptable | Yes |
| 850.1035 (72-3(c)) | Mysid Acute Toxicity Test | BAS 800 H<br>M07 | 47127903<br>47560303 | Acceptable<br>Acceptable | Yes |
| 850.1400 (72-4) | Fish Early-Life Stage Toxicity Test | BAS 800 H | 47127908 | Acceptable | Yes |
| 850.1300 (72-4) | Daphnid Chronic Toxicity Test | BAS 800 H | 47127907 | Acceptable | Yes |
| NA | Midge Chronic Toxicity in Spiked Water System | BAS 800 H | 47127910 | Supplemental[4] | NA |
| 850.5400 | Algal Toxicity | BAS 800 H | 47127923 | Acceptable | Yes |

| | | | | | |
|---|---|---|---|---|---|
| (123-2) | (Tier II) | BAS 800 H<br>BAS 800 H<br>BAS 800 H<br>M07<br>M08<br>BAS 781 02H | 47127924<br>47127925<br>47127926<br>47560301<br>47560305<br>47560403 | Acceptable<br>Acceptable<br>Acceptable<br>Acceptable<br>Supplemental[5]<br>Acceptable | |
| 850.4400<br>(123-2) | Aquatic Plant Toxicity Test Using *Lemna* spp. | BAS 800 H<br>BAS 781 02H<br>M07<br>M08 | 47127922<br>47560404<br>47560302<br>47560306 | Acceptable<br>Acceptable<br>Acceptable<br>Acceptable | Yes |
| 850.3020<br>(141-1) | Honey Bee Acute Contact Toxicity | BAS 800 H<br>BAS 800 01H | 47127917<br>47445903 | Acceptable<br>Acceptable/Supplemental[6] | Yes |
| 850.6200 | Acute Earthworm Toxicity | BAS 800 H<br>M08 | 47127927<br>47560307 | Acceptable<br>Acceptable | Yes |
| 850.4100<br>850.4150 | Terrestrial Plant Seedling Emergence and Vegetative Vigor | BAS 800 01H<br>BAS 800 01H<br>BAS 800 02H<br>BAS 800 02H<br>M07<br>M08 | 47127919<br>47127921<br>47127918<br>47127920<br>47560304<br>47560308 | Acceptable<br>Acceptable<br>Acceptable<br>Acceptable<br>Acceptable<br>Acceptable | Yes |
| NA | Acute Toxicity to Predaceous Mite (*Typhlodromus pyri*) | BAS 781 02H<br>BAS 800 01H | 47523902<br>47430803 | Supplemental[4]<br>Supplemental[4] | NA |
| NA | Acute Toxicity to Parasitoid Wasp (*Aphidius rhopalosiphi*) | BAS 781 02H<br>BAS 800 01H | 47523901<br>47523804 | Supplemental[4]<br>Supplemental[4] | NA |
| NA | Soil Microflora Carbon Transformation Test | BAS 800 01H | 47430801 | Supplemental[4] | NA |
| NA | Soil Microflora Nitrogen Transformation Test | BAS 800 01H | 47430802 | Supplemental[4] | NA |

[1] Data are available for technical grade saflufenacil (BAS 800 H), formulated products (BAS 781 02H, BAS 800 01H, BAS 800 02H), and metabolites (M07 and M08).

[2] EFED policy requires that the lack of acute oral passerine data be listed as a data gap; however given the timing of the policy and the lack of observed effects to other tested bird species, EFED recommends that the registration decision not be delayed based on this data gap.

[3] MRID 47699904 replaces MRID 47127915 as an updated version of the Bobwhite quail reproduction study.

[4] Non-guideline study.

[5] Precipitate in highest test concentration where effects were observed.

[6] The acute contact portion of the submitted honey bee study with BAS 800 01H is classified as "Acceptable"; the acute oral portion of the study is classified as "Supplemental" because acute oral honey bee tests are non-guideline studies.